2005-2006 HAMMER™

2006 VEGAS JACKPOT™

THE NEW AMERICAN MOTORCYCLE®

& NESS SIGNATURE SERIES VEGAS JACKPOT

SERVICE MANUAL

THE NEW AMERICAN MOTORCYCLE™

2005-2006 Hammer™
2006 Vegas Jackpot™
2006 Ness Signature Series Vegas Jackpot™

SERVICE MANUAL

Part Number 9920340

Foreword

This manual is designed primarily for use by Victory service technicians in a properly equipped shop and should be kept available for reference in the shop area. All references to left (LH) and right (RH) side of the motorcycle are from the operator's perspective when seated in a normal riding position.

Some procedures outlined in this manual require a sound knowledge of mechanical theory, tool use, and shop procedures in order to perform the work safely and correctly. Read the text and be familiar with the service procedures before starting the work. Certain procedures will require the use of special tools. Use only the proper tools as specified. If you have any doubt as to your ability to perform any of the procedures outlined in this service manual, contact an authorized Victory dealer for service.

This manual includes procedures for maintenance, component identification and repair, along with service specifications for the models listed above. Comments or suggestions about this manual may be directed to: Service Publications Dept. @ Polaris Sales Inc. 2100 Hwy 55 Medina, Minnesota 55340. Victory dealers can also use the on-line feedback forum located at:www.polarisdealers.com under News, Forms & Links/Service & Warranty/Polaris Manual Feedback link and fill out the information on the form.

© 2005 Polaris Industries. All information contained in this publication is based on the latest product information available at the time of publication. Due to constant improvements in the design and quality of production components, some minor discrepancies may result between the actual vehicle and the information presented in this publication. Depictions and /or procedures in this publication are intended for reference use only. No liability can be accepted for omissions or inaccuracies in this publication. Any reprinting or reuse of the depictions and/or procedures contained in this publication is expressly prohibited. Printed in U.S.A.

GENERAL & MAINTENANCE	GENERAL	1
	MAINTENANCE	2
	FRAME/BODY/EXHAUST	3
ENGINE	LUBRICATION & COOLING	4
	FUEL SYSTEM/FUEL INJECTION	5
	ENGINE REMOVAL & INSTALLATION	6
	CYLINDER HEAD & VALVES	7
	CYLINDER & PISTON	8
	CLUTCH, PRIMARY, & SHIFT	9
	TRANSMISSION & CRANKSHAFT	10
CHASSIS	DRIVE LINE	11
	FRONT WHEEL & SUSPENSION	12
	REAR WHEEL & SUSPENSION	13
	TIRES	14
	BRAKES	15
ELECTRICAL	CHARGING SYSTEM	16
	IGNITION SYSTEM & BATTERY	17
	ELECTRIC STARTER	18
	LIGHTING & INSTRUMENTATION	19

1

CHAPTER 1
GENERAL INFORMATION

GENERAL INFORMATION 1.3
TRADEMARKS 1.3
SERVICE RULES 1.3
SAFETY INFORMATION 1.4
UNDERSTANDING SAFETY LABELS & INSTRUCTIONS 1.4
REFINISHING 1.5
VICTORY TOUCH-UP AND REFINISHING PAINT / DETAIL & FINISHING KITS 1.5
PAINTING TERMS 1.5
PAINT COLORS BY MODEL 1.6
PAINT COLOR CODES 1.7
VEHICLE INFORMATION 1.8
VEHICLE IDENTIFICATION NUMBER (VIN) & MODEL NUMBER DESCRIPTIONS . . . 1.8
VIN NUMBER LOCATION 1.9
MODEL NUMBER LOCATION 1.9
ENGINE NUMBER LOCATION 1.9
KEY IDENTIFICATION NUMBER 1.9
PUBLICATIONS & TECHNICAL LITERATURE 1.10
PUBLICATION PART NUMBERS 1.10
MATERIAL SAFETY DATA SHEET (MSDS) 1.10
BREAK IN PERIOD 1.11
BREAK-IN PROCEDURE 1.11
EMISSIONS 1.11
EMISSION CONTROL SYSTEMS / EMISSION SOURCES 1.11
EXHAUST EMISSION CONTROL 1.12
NOISE EMISSION CONTROL SYSTEM 1.12
CRANKCASE EMISSION CONTROL 1.12
EVAPORATIVE EMISSION CONTROL (CALIFORNIA MODELS) 1.12
INSTRUMENTS 1.13
SPEEDOMETER 1.13
TACHOMETER 1.13
ODOMETER 1.13
TRIP ODOMETER 1.13
INDICATOR LIGHTS 1.14
SPECIAL SERVICE TOOLS 1.15
GENERAL & PRECISION MEASUREMENT 1.15
TUNE UP & MAINTENANCE 1.15
ELECTRICAL 1.15
ENGINE, CLUTCH, & TRANSMISSION 1.16
STEERING & SUSPENSION 1.16
WHEEL & TIRE 1.17
FUEL SYSTEM & FUEL INJECTION 1.17
TOOL ORDERING INFORMATION 1.17
TRANSPORTING AND SECURING THE MOTORCYCLE 1.18
ROUTING DIAGRAMS 1.19
WIRE HARNESS - LEFT REAR FRAME 1.19
WIRE HARNESS - RIGHT REAR FRAME 1.20
WIRE HARNESS - RIGHT SIDE 1.21
WIRE HARNESS - UNDER SEAT 1.22
REAR FENDER 1.23

WIRE HARNESS CONNECTOR LOCATIONS. 1.24
TOP VIEW 1.24
LEFT SIDE VIEW. 1.25
RIGHT SIDE VIEW 1.26
FUEL TANK VENT AND DRAIN HOSE ROUTING 1.27
2005 HAMMER - 49 STATE, CANADA, UK 1.27
2006 - ALL EXCEPT CALIFORNIA MODELS 1.28
CALIFORNIA MODELS (ALL) 1.29
REFERENCE 1.30
SAE TAP DRILL SIZES 1.30
METRIC TAP DRILL SIZES. 1.30
DECIMAL EQUIVALENTS. 1.30
FAHRENHEIT TO CELSIUS 1.31
MEASUREMENT CONVERSION CHART. 1.31

GENERAL INFORMATION

TRADEMARKS

Victory acknowledges the following products mentioned in this manual:

FLEXLOC, Registered Trademark of SPS Technologies
Loctite, Registered Trademark of the Loctite Corporation
STA-BIL, Registered Trademark of Gold Eagle
Nyogel, Trademark of Wm. F. Nye Co.
Fluke, Registered Trademark of John Fluke Mfg. Co.
Mity Vac, Registered Trademark of Neward Enterprises, Inc.
Torx, Registered Trademark of Textron

SERVICE RULES

In order to perform service work efficiently and prevent costly errors, technicians should read the text in this manual and familiarize themselves with the procedures before beginning. Notes, Cautions and Warnings have been included for clarification of text and safety concerns. Knowledge of mechanical theory, tool use and shop procedures are necessary to perform some procedures in this manual safely and correctly.

Use only genuine Victory service parts, including fasteners that require replacement if removed. Do NOT substitute fasteners or hardware.

Cleanliness of parts and tools as well as the work area is of primary importance. Dirt and foreign matter will cause damage to precision parts. Clean the motorcycle before beginning service. Clean all parts before installing.

If difficulty is encountered in removing or installing a component, look to see if a cause for the difficulty can be found. If it is necessary to tap the part into place, use a soft face hammer and tap lightly.

Always follow torque specifications as outlined throughout this manual. Incorrect torquing may lead to serious machine damage or in the case of steering, driveline, and chassis components, can result in loss of control during operation of the motorcycle, which may result in severe personal injury or death.

If a torquing sequence is indicated for nuts, bolts or screws of a certain component, start all fasteners and hand tighten. Following the method and sequence indicated, tighten evenly to the specified torque value. When removing nuts, bolts or screws from a component with several fasteners, loosen them all about 1/4 turn before removing them to prevent distortion of that component.

Replace all oil seals, sealing washers, gaskets, and O-rings with new ones during assembly. Be sure the mating surfaces for the gasket are clean and smooth to avoid leaks and maintain specified tolerances.

Some procedures require removal of retaining rings or clips. Removal can weaken and deform these parts, therefore, they should always be replaced with new parts. When installing new retaining rings and clips, use care not to expand or compress them beyond what is required for installation.

Victory lubricants and greases have been specially formulated to provide maximum performance and protection when applied properly. In some applications, warranty coverage may be void if improper lubricants are used.

Parts requiring grease should be cleaned thoroughly and fresh grease applied before reassembly. Deteriorating grease loses lubricity and may contain abrasive foreign matter.

Always replace locking hardware such as lock nuts or lock washers, fasteners that have pre-applied locking agent, or any other fasteners as noted in this service manual with genuine Victory hardware from an authorized Victory dealer.

Working with batteries can be hazardous. Review all battery warnings and cautions. See “BATTERY SAFETY” on page 16.2.

SAFETY INFORMATION

UNDERSTANDING SAFETY LABELS & INSTRUCTIONS

READ AND BECOME FAMILIAR WITH ALL WARNING AND CAUTION SYSMBOLS AND STATEMENTS LISTED BELOW AND IN THE TEXT OF THIS MANUAL BEFORE YOU BEGIN WORK.

DANGER, WARNINGS, & CAUTION SYMBOLS

This is the safety alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury. Your safety is involved!

⚠WARNING

Indicates a potential hazard which could result in severe injury or death.

⚠CAUTION

Indicates a potential hazard which may result in minor personal injury or damage to the motorcycle.

CAUTION

Indicates a situation that can result in damage to the motorcycle.

NOTE:

The word “NOTE:”in this manual will alert you to key information or instructions.

⚠WARNING

Gasoline is extremely flammable and explosive under certain conditions.

- Always stop the engine and refuel outdoors or in a well ventilated area.
- Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored.
- Do not overfill the tank. Do not fill the tank neck above the fuel tank insert. Leave air space to allow for fuel expansion.
- If you get gasoline in your eyes or if you swallow gasoline, see your doctor immediately. Never try to syphon gasoline using mouth suction.
- If you spill gasoline on your skin or clothing, immediately wash it off with soap and water and change clothing.
- Never start the engine or let it run in an enclosed area. Engine exhaust fumes are poisonous and can cause loss of consciousness or death in a short time.

⚠WARNING

The engine exhaust from this product contains chemicals known to cause cancer, birth defects or other reproductive harm.

⚠WARNING

Improper repairs or service can create unsafe conditions that may cause severe personal injury or death.

⚠WARNING

The engine and exhaust components on this product become very hot during operation and remain so for a period of time after the engine is stopped.

⚠WARNING

Never run the engine in an enclosed area without a properly functioning exhaust gas evacuation system connected to the product.

⚠WARNING

Modifications to this motorcycle not approved by Victory may cause loss of performance, excessive emissions, and make the machine unsafe for use.

⚠WARNING

Brake fluid is poisonous.

KEEP OUT OF REACH OF CHILDREN.

⚠WARNING

Wear insulated protection for hands and arms or wait until hot components have cooled sufficiently before working on the product.

⚠WARNING

Brake fluid is poisonous. Do not ingest or allow brake fluid to contact eyes. Always wear eye protection when working with brake fluid.

⚠WARNING

Battery electrolyte is poisonous. It contains sulfuric acid. Serious burns can result from contact with skin, eyes or clothing.

CAUTION

Brake fluid will damage plastic, painted and rubber parts. Protect these surfaces whenever the brake system is being serviced.

California Proposition 65 Warning

This product contains or emits chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

REFINISHING

VICTORY TOUCH-UP AND REFINISHING PAINT

Service Paint products are available in three different sizes and applications. Some paint colors require up to 3 components to create a color. Prices subject to change without notice. Dealer is responsible for freight on paint and paint products.

.6 ounce bottle: (Order Multiple of 2) For brush touch-up of small nicks.

10 ounce aerosol can: (Order Multiple of 2)
Apply light even coats for best results. Recoat time is from 30-60 minutes or after 4 days of drying to prevent lifting.

Quarts: (Sold as each)
For repaint of properly prepared plastic components or metal substrates.
Paint is a high quality acrylic urethane manufactured by U.S. Paint.
Mix as indicated on back of paint can. Paint can be recoated after paint is tack free or has ”flashed off”.
Paint finish may be wet sanded and buffed after coating has cured.

How to order:
Authorized Victory Dealers only. Place your order via the dealer web site at :
www.polarisdealers.com / News Forms & Links / Pure Polaris
Note: There will be a 25% service fee charged for all returns. Polaris dealer will be responsible for return freight.

VICTORY DETAIL AND FINISH RESTORER KITS

A Detail Kit (polish, wax, and dressing) and a Restore Kit (polish, and swirl / scuff remover) is available from the Victory parts department for painted surface protection and to remove minor surface imperfections.

Detail Kit: 2872195 (Includes Non-Abrasive Wash, Swirl Remover / Polish, Polywax Final Finish, Vinyl / Rubber Protector, Applicator and Cloth.

Restore / Polish: 2872192 (12 oz. Aerosol)

PAINTING TERMS

The following terms describe the general operations referred to in the Paint Color Code chart on page 1.7.

E-Coat (Factory Applied): This material is used as a rust protection. It is also used to form a bond between bare metal and the primer or base coat. Full-hide colors (such as black) do not require primer.

Primer: Primer is necessary when applying some colors such as Flame Yellow, Sonic Blue, Solar Red, etc. The purpose of a primer coat is to prevent bleed-through or transparency in subsequent color coats.

Base Coat: A color paint layer applied under another color or under the clear topcoat to improve color matching and consistency.

Top Coat: Outermost layer of paint or clear coat.

PAINT COLORS BY MODEL

NOTE: Refer to www.polarisdealers.com for more information.

NOTE: The 9th letter of the model number designate the color. “P” in the 10th position indicates Premium model. Refer to page 1.7 for paint color code. Detailed paint ordering information is available on the dealer web site at News, Forms & Links / Pure Polaris / Paint Codes & Part Numbers.

HAMMER™ MODEL YEAR 2005		
Model Number	**Model**	**Description / Color**
V05HB126/226 (Feature & Option)	Hammer	Toxic Green w/ Tribal Tattoo
V05HB26 CA, CAP, DA, DAP, LA, LAP, UA	Hammer	Cruiser / PHAT Black
V05HB26 CK, DK, LK	Hammer	Flame Yellow
V05HB26 CL, DL, LL	Hammer	Indy Red
V05HB26 CM, DM, LM	Hammer	Cosmic Sunburst
V05HB26 CSP, DSP, LSP, US	Hammer	Indy Red w/ Tribal Tattoo

HAMMER™ MODEL YEAR 2006		
Model Number	**Model**	**Description / Color**
V06HB26 CA, CAP, DA, DAP, LA, LAP, UA	Hammer	Cruiser / PHAT Black
V06HB26 CB, DB, LB,	Hammer	Indy Red
V06HB26 CJ, DJ, LJ,	Hammer	Supersonic Blue w/ Clear Pearl
V06HB26 CK, DK, , LK, UK	Hammer	Flame Yellow w/ Tribal Tattoo
V06HB26 CLP, DLP, LLP, UL	Hammer	Nuclear Sunset w/ Tribal Tattoo

VEGAS JACKPOT™ / NESS SIGNATURE SERIES VEGAS JACKPOT™ MODEL YEAR 2006		
Model Number	**Model**	**Description / Color**
V06XB26 CA, CAP, DA, DAP, LA, LAP	Vegas Jackpot	Cruiser / PHAT Black
V06XB26 CM, CMP, DM, DMP, LM, LMP	Vegas Jackpot	Cruiser Black w/ X Graphics
V06XB26 CN, CNP, DN, DNP, LN, LNP, UN	Vegas Jackpot	Sunset Red w/ X Graphics
V06XB26 CP, CPP, DP, DPP, LP, LPP	Vegas Jackpot	Competition Yellow w X Graphics
V06BC26 CR, DR, LR	Ness Signature	Cruiser Black w/ Ness Flames
V06BC26 CS, DS, LS	Ness Signature	Supersonic Blue w/ Ness Graphics
V06XB26 CT, CTP, DT, DTP, LT, LTP	Vegas Jackpot	Sunset Red

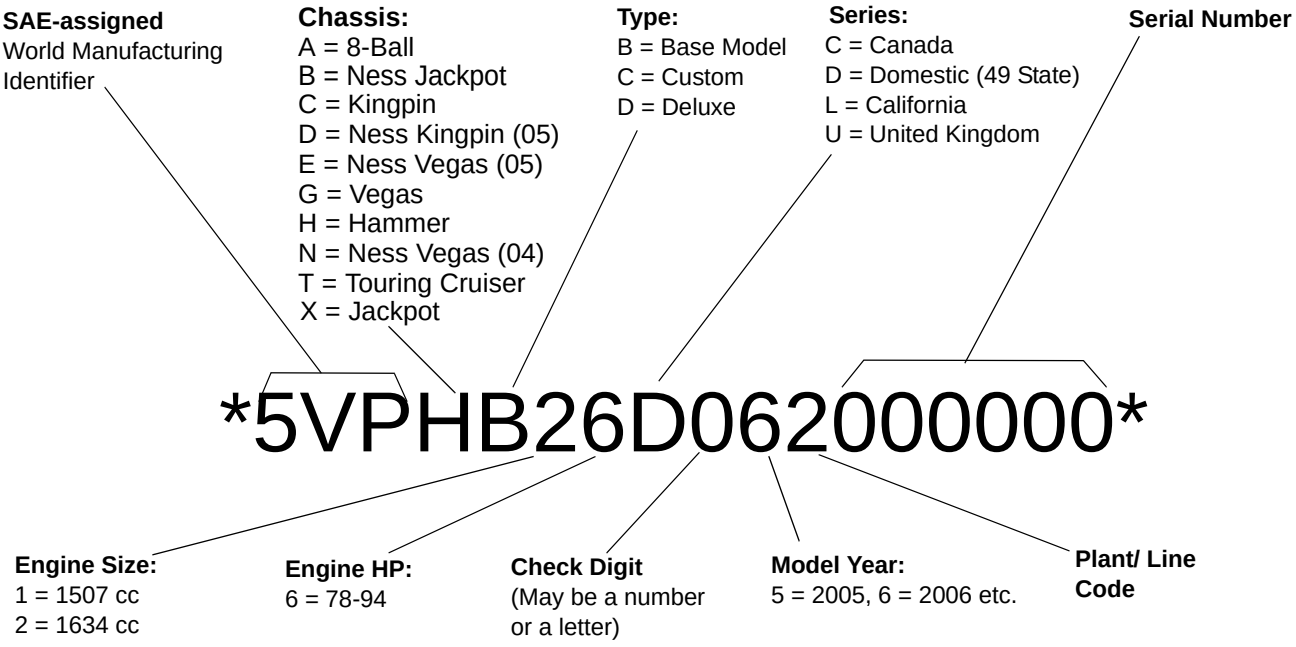
PAINT COLOR CODES

PAINT COLOR - 2005 and 2006	PAINT CODE	NOTES
Cruiser Black (PHAT)	P-266	
Indy Red	P-293	Aerosols and Touch-Ups require base coat of Indy Red with topcoat of Clear Metallic (CM). Paint kits require white undercoater (WU).
Flame Yellow	P-388	
Turbo Silver	P-445	Paint kits require base coat with a topcoat of Clear Metallic (CM)
Cosmic Sunburst	P-446	Clear coat (C) required
Toxic Green Pearl	P-491	Aerosols, Kits, and Touch-Ups require a white base (WU). Toxic Green Pearl.
Nuclear Sunset	P-493	
Competition Yellow	P-517	
Sunset Red	P-520	
Nuclear Sunset w/ Tribal Tattoo	P-1210	P-493 w/ X Graphic
Flame Yellow w/ Tribal Tattoo	P-1214	P-388 w/ Tribal Tattoo
Sunset Red w/ X Graphics	P-1223	P-520 w/ X Graphic
Black w/ X Graphics	P-1224	P-266 w/ X Graphic
Competition Yellow w/ X Graphics	P-1227	P-517 w/ X Graphic
Supersonic Blue / Clear Pearl	P-1231	Aerosols, Kits, and Touch-Ups require a white base (WU). Supersonic Blue (P-499) and Clear Pearl topcoat (CP).
Metallic Flake Additive	METALLIC	Add vial of flake to quart of clear base
Silver Undercoater	SU	Base coat only
Antares Red Undercoater	RU	Base coat only
Clear	C	
Clear Metallic	CM	Clear with metal flake added
Clear Pearl	CP	Clear with pearl flake added
UNDERCOATERS (Base Coat Only)	WU, OWU, PWU, VVU	WU=White Undercoater; OWU=Off-White Undercoater; PWU=Pearl White Undercoater; VVU=Victory Violet Undercoater

VEHICLE INFORMATION

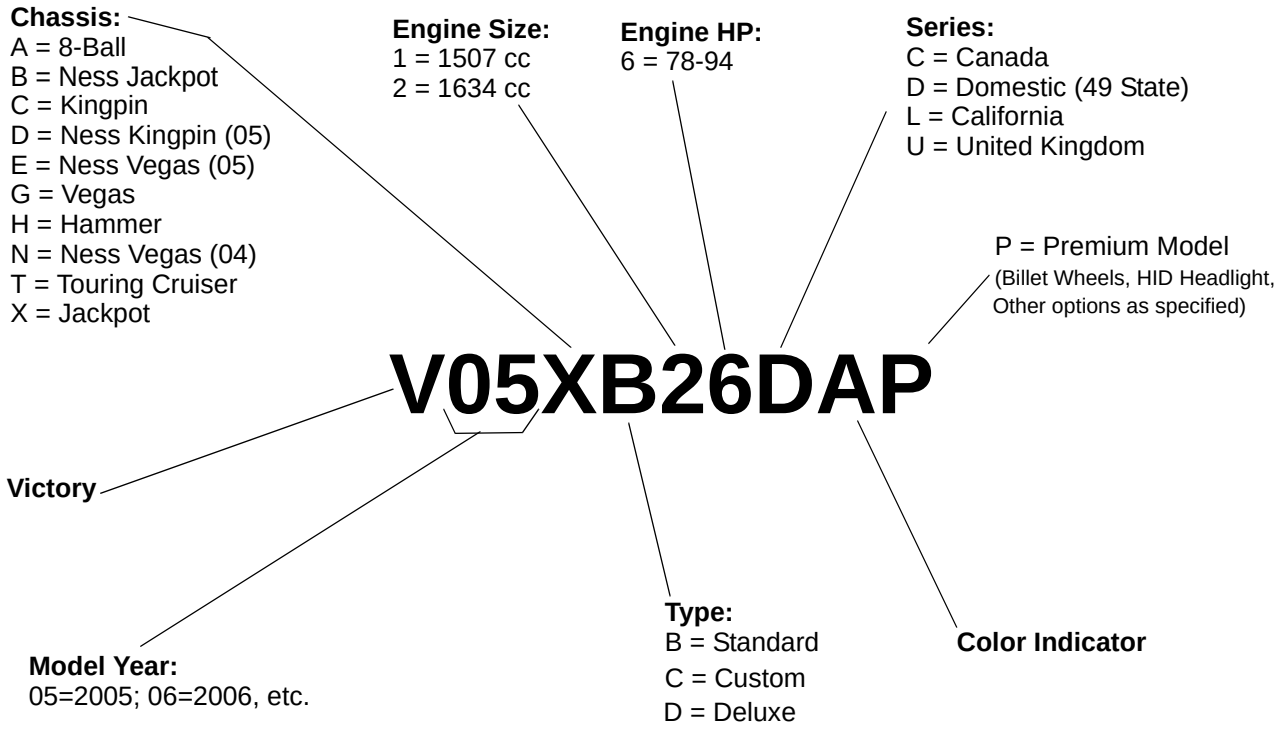
VEHICLE IDENTIFICATION NUMBER (VIN)

See "VIN NUMBER LOCATION" on page 1.9 for location on the vehicle.



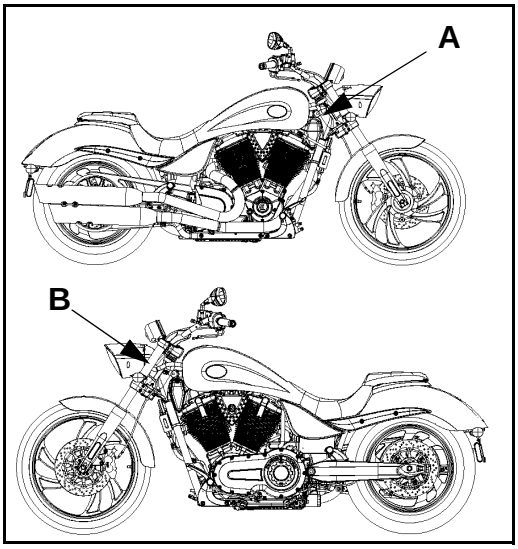
MODEL NUMBER

See "MODEL NUMBER LOCATION" on page 1.9 for location on vehicle. See "PAINT COLORS BY MODEL" on page 1.6 for color.



VIN NUMBER LOCATION

The vehicle identification number (A) is stamped on the right side of the steering head.

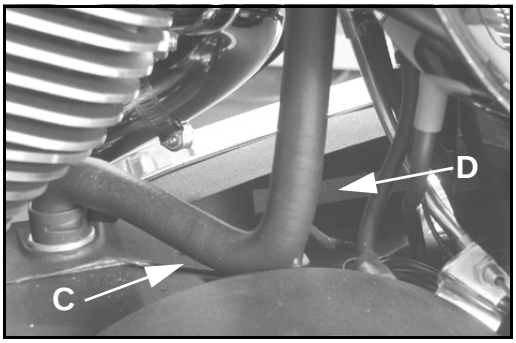


MODEL NUMBER LOCATION

The model label (B) is located on the left side of the steering head.

ENGINE NUMBER LOCATION

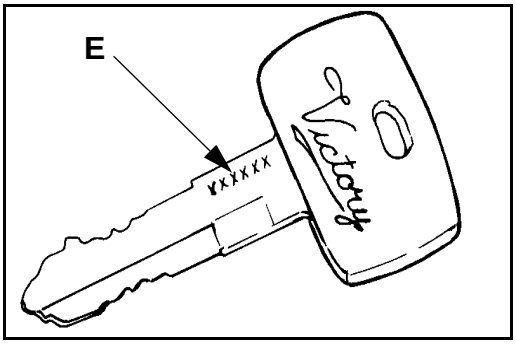
The engine number label (C) is attached to the horizontal crankcase surface (2005 Hammer) or stamped into the right crankcase boss (D) (2006 models). The label or stamping identifies the engine model and serial number.



KEY IDENTIFICATION NUMBER

The key identification number (E) is stamped on the key tag. If the key and the identification number are lost or misplaced, the lock set (ignition switch / fuel cap) must be replaced.

Key blanks are available from service parts. Locksmiths familiar with the motorcycle industry will be able to cut a replacement key with the key I.D. number and a Victory key blank.



PUBLICATIONS & TECHNICAL LITERATURE

PUBLICATION PART NUMBERS

The following chart lists the part numbers for Owner's Manuals, parts books, and parts microfiche.

OTHER VICTORY PUBLICATIONS			
Year / Model	**Publication Part Numbers U.S. and (Canada)**		
	Owner's Manual	**Parts Book**	**Microfiche**
2003 Vegas	9918231 (Canada 9918232)	9918368	9918369
2004 Vegas / Ness Vegas	9918115 (Canada 9918116)	9918954	9918955
2004 Kingpin	9918948 (Canada 9918949)	9918956	9918957
2005 Vegas / Ness Vegas	9919441 (Canada 9919442)	9919623	9919624
2005 Kingpin / Ness Kingpin	9919441 (Canada 9919442)	9919625	9919626
2005 Vegas 8-Ball	9919441 (Canada 9919442)	9919623	9919624
2005 Hammer	9919443 (Canada 9919444)	9919629	9919630
2006 Vegas	9920119 (Canada 9920120) (California 9920563)	9920335	9920336
2006 Kingpin	9920119 (Canada 9920120) (California 9920563)	9920308	9920339
2006 8-Ball	9920119 (Canada 9920120) (California 9920563)	9920335	9920336
2006 Touring Cruiser	9920117 (Canada 9920118)	9920343	9920344
2006 Hammer	9920121 (Canada 9920122) (California 9920564)	9920341	9920342
2006 Vegas Jackpot / 2006 Ness Signature Series Jackpot	9920327 (Canada 9920328)	9920345	9920346
OTHER VICTORY SERVICE MANUALS			
2003-2006 Vegas / Kingpin / 8-Ball / Ness Signature Series Vegas & Kingpin	9920337		
2002 - 2006 Classic & Touring Cruiser	Service Manual 9919632		

MATERIAL SAFETY DATA SHEET (MSDS)

To review or print a Material Safety Data Sheet for Victory maintenance products, chemicals or lubricants visit:
www.polarisdealers.com / news forms & links / pure polaris
OR: Contact Dealer Support (Victory Dealers)

Non-Dealers contact Customer Service at 763-417-8650

BREAK IN PERIOD

BREAK-IN PROCEDURE

There is never a more important period in the life of a new Victory motorcycle than the period between zero and 500 miles (805 km). A Victory motorcycle is manufactured using the best possible materials and manufacturing techniques, but the final machining process is the break-in. During break-in period, many parts in the engine wear and polish to correct operating clearances. During this time, the operator should:

- Avoid prolonged full throttle operation.
- Avoid operation which might result in excessive heating of the engine.

The general break-in guidelines are as follows:

BREAK-IN GUIDELINES		
Miles/km	**Throttle Position**	**Notes**
0-90 miles	0-1/3	Avoid prolonged operation above 1/3 throttle. Stop engine and let it cool following every hour of operation. Vary speed of motorcycle. Do not operate machine at one set throttle position.
90-300 miles	0-1/2	Avoid prolonged operation above 1/2 throttle. Stop engine and let it cool following every hour of operation. Vary speed of the motorcycle. Do not operate machine at one set throttle position.
300-500 miles	0-3/4	Avoid cruising speeds above 3/4 throttle.
500 miles	**Replace the engine oil and engine oil filter.** Perform 500 mile service on the machine. See chapter 2 for more information.	
500 +	Avoid prolonged full-throttle operation. Vary the engine speed occasionally. Follow the pre-ride inspection outlined in the owner's manual.	

EMISSIONS

EMISSION CONTROL SYSTEMS

The U.S. Environmental Protection Agency and California Air Resources Board (CARB) require manufacturers to certify that their motorcycles comply with applicable exhaust emissions standards during their useful life, and that motorcycles built after January 1, 1983 comply with applicable noise emission standards for one year or 6,000 km (3,730 mi) after the time of sale to the ultimate purchaser, when operated and maintained according to the instructions provided.

EMISSION SOURCES

An internal combustion engine produces carbon monoxide and hydrocarbons during operation. Hydrocarbons must be controlled because under some conditions hydrocarbons react with sunlight to produce photochemical smog. Carbon monoxide must be controlled because it is toxic.

EXHAUST EMISSION CONTROL

Victory Motorcycles have an electronic engine management system which controls fuel delivery and ignition timing to control hydrocarbon and carbon monoxide emissions. Except for TPS adjustments as required by the Periodic Maintenance Interval Table on page 2.11, or if components are replaced that affect idle speed, no adjustments should be made to the system.

NOISE EMISSION CONTROL SYSTEM

Tampering with Noise Control Systems is Prohibited. Federal law prohibits the following acts or causing thereof:

1. The removal or rendering inoperative by any person other than for purposes of maintenance, repair or replacement, any device or element of design incorporated into the motorcycle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or
2. The use of the motorcycle after such device or element of design has been removed or rendered inoperative.

Among those acts presumed to constitute tampering are the acts listed below:

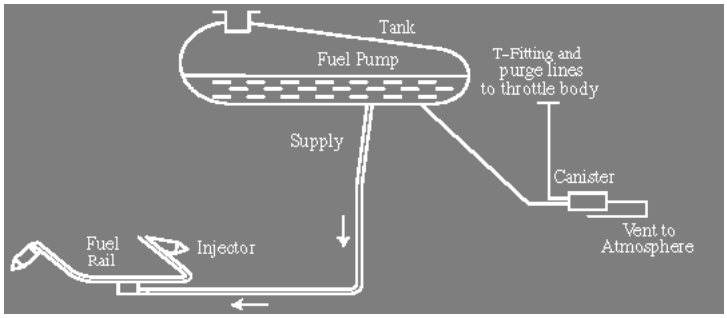
1. Removal of, or puncturing the muffler, baffles, header pipes or any other component which conducts exhaust gases.
2. Removal or puncturing of any part of the intake system.
3. Lack of proper maintenance.
4. Replacing any moving part of the motorcycle or parts of the exhaust / intake system with parts other than those specified by the manufacturer.

CRANKCASE EMISSION CONTROL

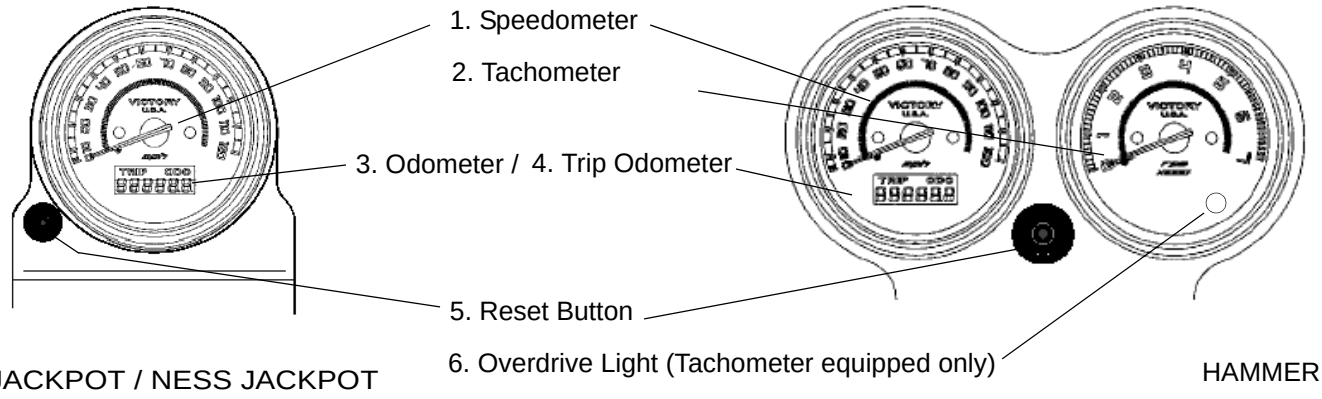
The crankcase emission control system is comprised of a closed system that routes crankcase emissions through the air cleaner into the combustion chamber.

EVAPORATIVE EMISSION CONTROL (CALIFORNIA MODELS)

A vacuum hose connects the purge port manifold to the charcoal canister. Evaporated fuel vapor passes from the fuel tank, along the vent hose , and to the charcoal canister. Activated charcoal in the canister filters the regulated elements of the vapor for storage until the engine is started and the motorcycle is driven. The canister and liquid trap are cleaned as part of the engine's ordinary combustion cycle. Inspect the evaporative control system clamps, hoses, fittings, canister and other hardware for wear or damage during each maintenance period of the motorcycle. Refer to the owner's manual for emission system warnings and instructions.



INSTRUMENTS



SPEEDOMETER (1)

The speedometer receives an input signal from the speed sensor located on top of the crankcase behind the rear cylinder. Pulse signals from the speed sensor are converted inside the speedometer to speed and distance outputs in miles (kilometers in Canada). These outputs are displayed by the analog needle (speed) or in the LCD window (distance). The speedometer operates only when the ignition switch is in the On position and the speed sensor has an input (vehicle is moving). Refer to Chapter 19 for speedometer or sensor diagnostics.

TACHOMETER (2)

The tachometer reports current engine speed in revolutions per minute (RPM). A red line on the gauge indicates maximum safe engine RPM. The tachometer may be standard equipment or an accessory on some models.

⚠ WARNING
Do not operate the engine over 5600 RPM. Excessive RPM could cause engine damage or failure that could result in you losing control of the motorcycle.

ODOMETER (3)

The odometer is the default mode of the speedometer LCD after starting the engine and displays the total miles traveled (km in Canada).

To toggle the display between Odometer and TRIP Odometer, the ignition switch must be in the ON position. Press the reset button (5). The display changes to TRIP".

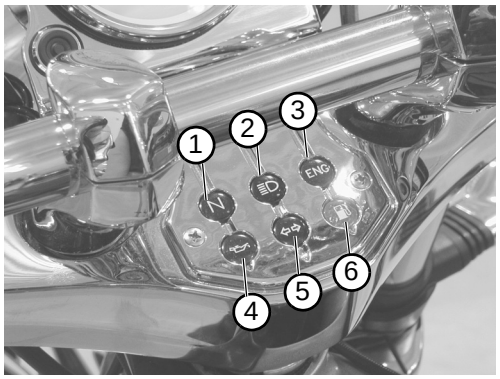
TRIP ODOMETER (4)

The trip odometer shows total distance traveled since the trip odometer was reset.

To toggle the display between Odometer and TRIP Odometer, the ignition switch must be in the ON position. Press the reset button. The display changes to TRIP".

To reset the trip odometer, the ignition switch must be in the ON position with the display in trip odometer mode. Press and hold the reset button (5) until the TRIP odometer display resets to zero.

INDICATOR LIGHTS



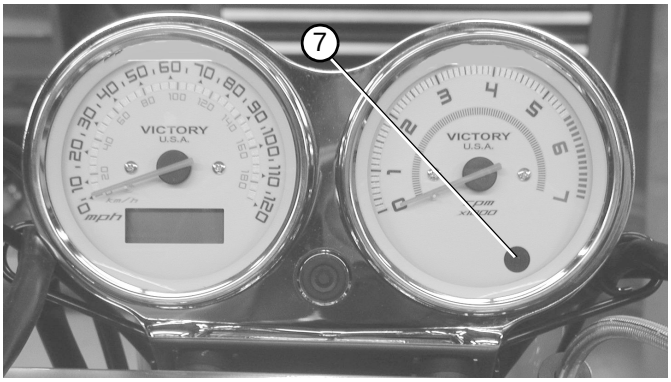


Table 1-1:

#	Symbol / Function	Operation
1	NEUTRAL INDICATOR	The neutral indicator illuminates when the transmission is in Neutral, and the ignition key is ON.
2	HEADLAMP HIGH BEAM	The headlamp high beam indicator illuminates when the headlamp switch is set to High and the ignition key is ON.
3	CHECK ENGINE INDICATOR	The check engine indicator will illuminate any time the ignition key is ON and the engine control module sensors report abnormal sensor or engine operation. The check engine indicator will continue to illuminate as long as the fault condition exists. It also illuminates momentarily when the ignition key is ON and the engine is not running. This demonstrates that the indicator is functioning properly.
4	LOW OIL PRESSURE INDICATOR	The low oil pressure indicator illuminates when engine oil pressure drops below safe operating pressure. If this indicator illuminates while the engine is running, turn the engine off immediately and check the oil level. Add oil if necessary. If the oil level is correct and the indicator remains illuminated after the engine is restarted, turn the engine off immediately. The low oil pressure indicator also illuminates when the ignition key is ON and the engine is not running. This demonstrates that the indicator is functioning properly.
5	TURN SIGNAL INDICATOR	The turn signal indicator flashes when the left, right, or both turn signals are active. If a turn signal bulb has failed, or if there is a short circuit in the turn signal system, the turn signal indicator flashes at more than twice the normal rate. This indicator is also used as the output display for the diagnostic “blink codes” when using the self-diagnostic feature of the Auto-Cancel Turn Signal system. Refer to Chapter 9 for more information on the self diagnostic feature.
6	LOW FUEL INDICATOR	The low fuel indicator illuminates when approximately 0.6 gallons (2.27 liters) of fuel remains in the fuel tank and the ignition key is ON.
7	OVERDRIVE INDICATOR	On vehicles equipped with a tachometer, the overdrive indicator is illuminated when the transmission is in Overdrive (6th gear) and the ignition key is ON.

SPECIAL SERVICE TOOLS

GENERAL & PRECISION MEASUREMENT

TOOL	PART NUMBER
Bearing & Seal Driver Set	PV-43558
Bore Gauge Set, 50-100mm	PV-3017
Decal, Service Bulletin Completion	7170107 (Order from Victory Parts Dept.)
Dial Caliper (Metric, 0-150mm)	PV-26900-7
Dial Caliper (Electronic Conversion. English 0-6” / Metric 0-150mm)	PV-39776
Dial Indicator, Adjustable (Metric. 10mm travel)	PV-26900-12
Dial Indicator Stand, Flexible. Magnetic Base	PV-34481
Engine Ear Listening Device	PV-39565
Feeler Gauge Set	PV-26900-8 or PV-26900-9
Outside Micrometer (0-25 & 25-50mm)	PV-3006, PV-3007
Outside Micrometer Set (0-100mm)	PV-3009
Plastigauge®	Commercially Available
Small Hole Gauge Set	Commercially Available
Straight Edge, Precision	PV-34673
Surface Plate	Commercially Available
Telescoping Gauge Set	PU-45423
Torque Wrench (3/8” Drive 0-50 in-lb. beam type)	PV-43543
Torque Wrench (1/2” Drive 0-150 lb-ft. beam type)	PV-43552
Torque Wrench (3/8” Drive 15-100 lb-ft. click type)	PV-43564

TUNE UP & MAINTENANCE

TOOL	PART NUMBER
Belt Tension Gauge	PV-43532
Cylinder Leakdown Tester	PV-35667-A
Compression Gauge Set	PV-33223
Oil Pressure Gauge Set	PV-43531
Oil Filter Wrench	65mm/2.5in. Commercially available

ELECTRICAL

TOOL	PART NUMBER
Ammeter Inductive Clamp for Fluke 73™ Multimeter	PV-39617
Electrical Connector Test Adapter Kit	PV-43526
Inductive Timing Light	PV-43537
Multimeter, Fluke 73™	PV-43546
Speedometer Signal Tester (Requires Adaptor PV-47303)	PV-43544
Speedometer Signal Test Adapter 2001-Current	PV-47303

ENGINE, CLUTCH, & TRANSMISSION

TOOL	PART NUMBER
Clutch Hub Holding Tool	PV-43518
Clutch Shaft Holder	PV-45028
Clutch Shaft Bearing Support (for clutch shaft installation)	PV-47331
Crankcase Assembly Tool (Same as Mainshaft / Crankcase Installer)	PV-46299 (Must be used with PV-45030) and Adaptor (Extension) PVX-47429
Crankcase Assembly Tool Adaptor	PVX-47429
Crankshaft Bearing Protector	PV-47207
Crankshaft Rotation Socket	PV-46988
Crankcase Separator (Crankcase Removal)	PV-47332
Engine Hoist or Lift	Commercially Available
Engine Lock Tool	PV-43502-A
Engine Stand	Commercially Available
Flywheel Puller	PV-43533
Mainshaft / Crankcase Installer (Crankcase Assembly)	PV-46299 (Must be used with PV-45030)
Moly Assembly Paste (Premium Starter Grease)	PN 2871460 (Order from Victory Parts Dept.)
Mainshaft (Output Shaft) Seal Installation Tool	PV-43505
Piston Ring Compressor (97mm +)	Includes PV-43570-1 Pliers, PV-43570-2 Band (3 5/8” to 3 7/8”)
Split Gear Line-Up Tool	Any 1/4” shaft: Example: 1/4” drill bit shank.
Valve Spring Compressors (Adapter is PV-43513-A)	PV-1253 or PV-4019 (Quick Release)

STEERING & SUSPENSION

TOOL	PART NUMBER
Blind Bearing Remover Set	PV-43551
Cartridge Shaft Holder (Kingpin / Hammer)	PV-47060
Damper Rod Holder (Vegas)	PV-43517
Fork Oil Level Gauge	PV-59000-A
Fork Seal Driver 43mm, Inverted (Kingpin / Hammer)	PV-47035
Fork Seal Driver, 43mm, Conventional (Vegas)	PV-47036
Fork Seal Guide Tool, 43mm (KP, Hammer, Vegas)	PV-47037
Steering Bearing, Wheel Bearing Installation Set	PV-43515
Steering Stem Bearing Removal Tool (Lower)	PV-44683
Steering Stem Bearing Adjustment Socket	PV-43508
Steering Stem Bearing Spanner Wrench	PV-43509
Shock Absorber Pre-Load Adjustment Spanner	PV-46993
Shock Spring Compressor	PV-43571

WHEEL & TIRE

TOOL	PART NUMBER
Air Pressure Gauge	Commercially Available
Tire Bead Breaker (May be part of the tire removal equipment being used)	Commercially Available
Tire Mounting Lubricant	Commercially Available
Tire Removal Equipment	Commercially Available
Rim Protector	PV-43536
Wheel Balancing/Truing Stand	TBA

FUEL SYSTEM & FUEL INJECTION

SPECIAL TOOLS- FUEL SYSTEM/ FUEL INJECTION	PART NUMBER
Victory/Polaris Diagnostic Tool Kit w/ Diagnostic Software	PV-46085 (See Chapter 5)
PV-46085 Kit Contents (The items at right are included in main kit above and can also be ordered separately)	Interface Cable PU-47151 Victory Interface Cable Adapter PV-46085-2
Kit - Air / Fuel Ratio Monitor (Includes components below)	PV-45410 (See Chapter 5)
Tube, Air/Fuel Monitor Sensor	PV-45410-1 (not required for Hammer / Jackpot)
O_2 Sensor (with wire harness and connector)	PV-45410-2
Cable, Air/Fuel Monitor Power & Volt Meter	PV-45410-3
Instruction Sheet, Air/Fuel Monitor	PV-45410-4
Fuel Pressure Gauge	PV-43506
Laptop Computer (Refer to diagnostic software user manual or HELP section for minimum specifications	Commercially Available

TOOL ORDERING INFORMATION

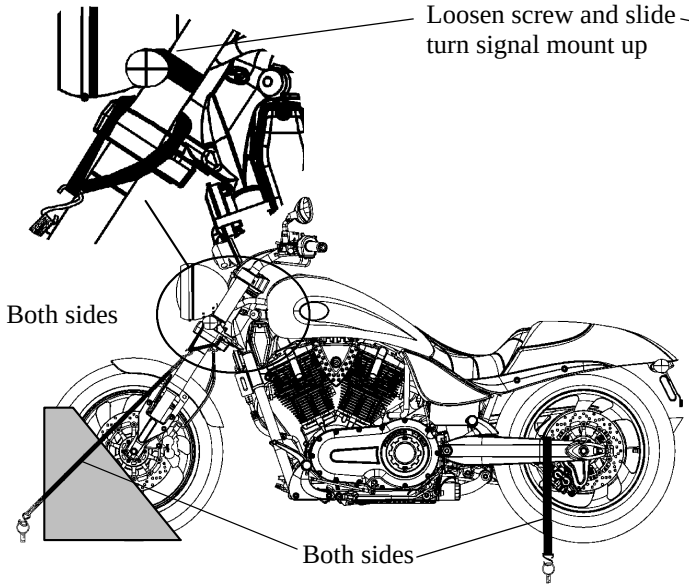
NOTE: Not all special tools listed here are applicable to models covered in this manual. Order Special Service Tools from SPX Corp. (Phone 800-328-6657 / FAX 586-578-7375) except where noted to order from Victory or as “Commercially Available”.

TRANSPORTING AND SECURING THE MOTORCYCLE

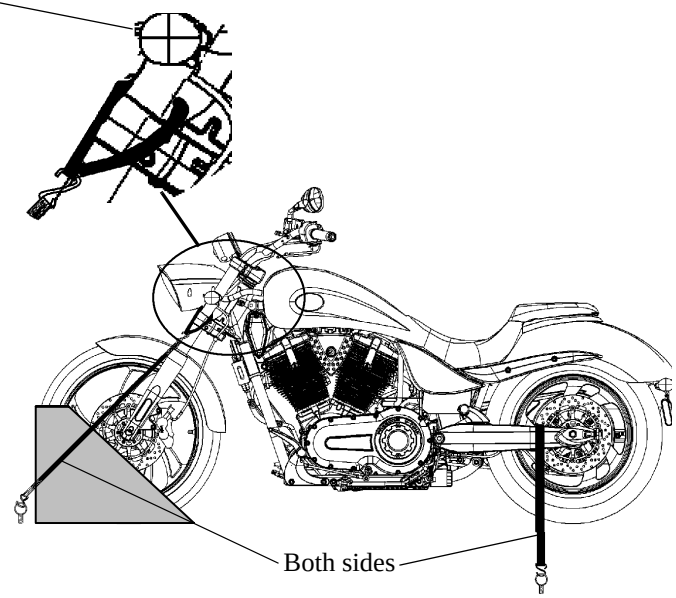
GENERAL GUIDELINES

If you must transport the motorcycle or secure it to a lift table:

- Use a truck, trailer, or lift table designed or equipped properly for motorcycles. Review truck, trailer or lift manufacturer's recommendations.
- Do not tow the motorcycle with another vehicle, as towing will impair the motorcycle's steering and handling, which can cause a loss of control.
- Position and restrain the motorcycle so it remains upright on the truck, trailer, or lift table as gasoline may leak out of the fuel tank vent if the motorcycle is transported at extreme angles. Gasoline is a fire hazard and it can also damage the motorcycle's finish.
- Do not restrain the motorcycle using the handlebars. Loosen the turn signals and slide them up the fork tube as shown, enough to make room for a soft tie-down extension strap (no buckles). Place tie downs around the lower triple clamp as shown, around the fork tube below the turn signal mount and above the lower triple clamp.
- Secure the rear of the motorcycle with tiedowns around the swingarm, being careful to avoid brake lines, exhaust, drive belt, or drive belt guards.



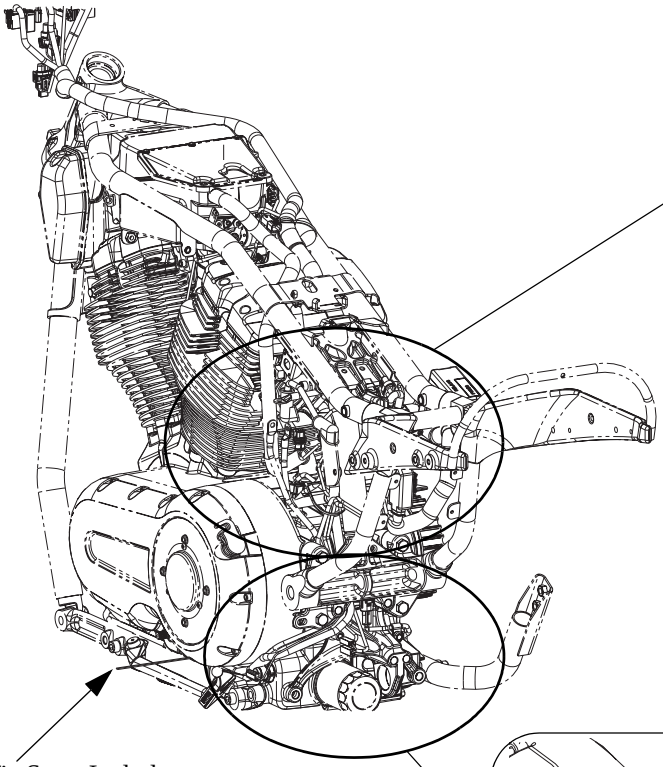
Hammer

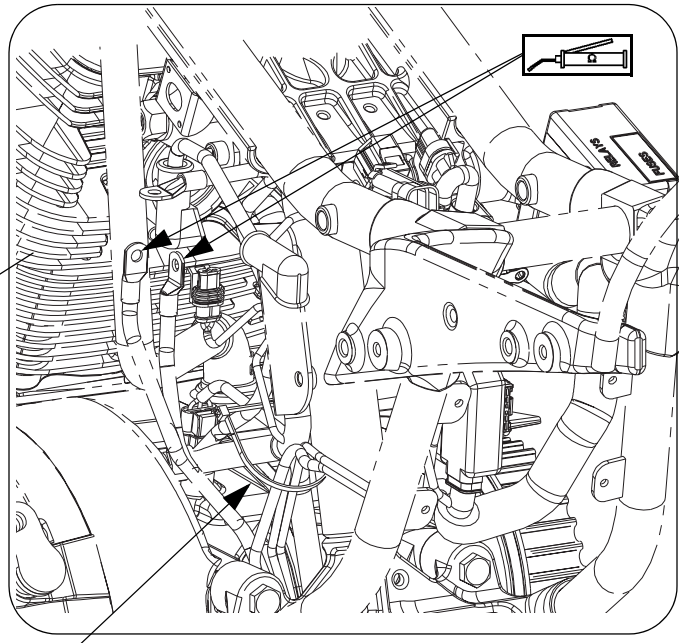


Jackpot

ROUTING DIAGRAMS

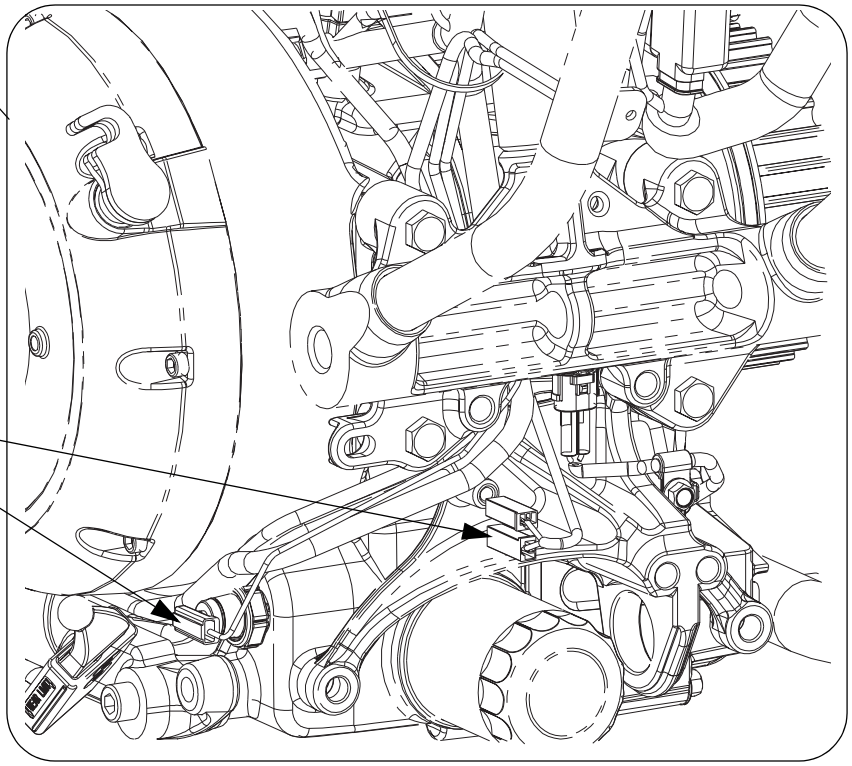
WIRE HARNESS - LEFT REAR FRAME



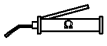


Tie Strap Includes:
Frame Tube
Main Bundle
Regulator / Rectifier Harness
Crankshaft Position Sensor (CPS) Harness

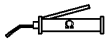
Tie Strap Includes:
Starter Cable
Regulator / Rectifier Harness
Crankshaft Position Sensor (CPS) Harness
! Starter cable to be routed on outside of CPS and Voltage Regulator wiring



Rear Brake Light Switch

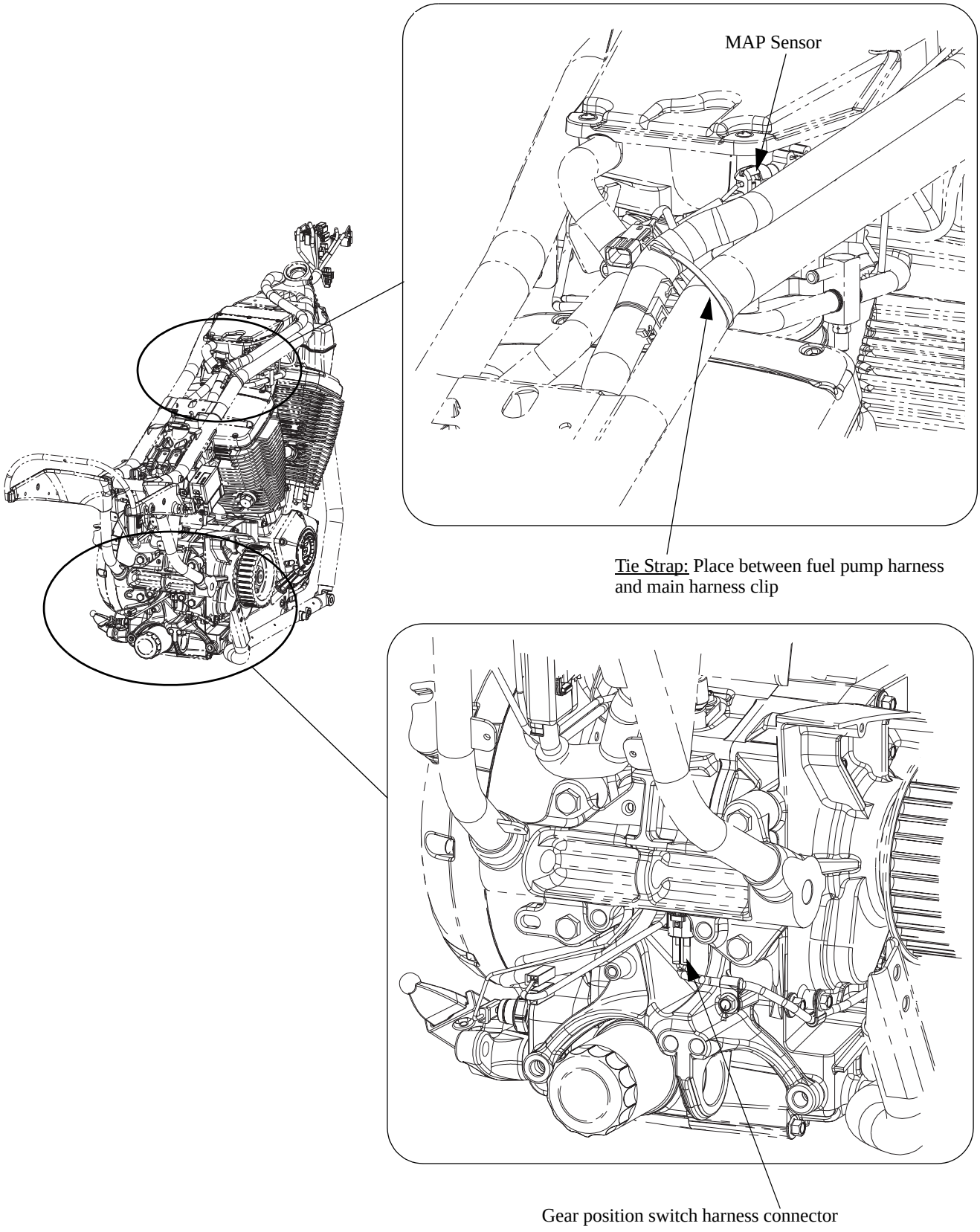


Oil Pressure Switch

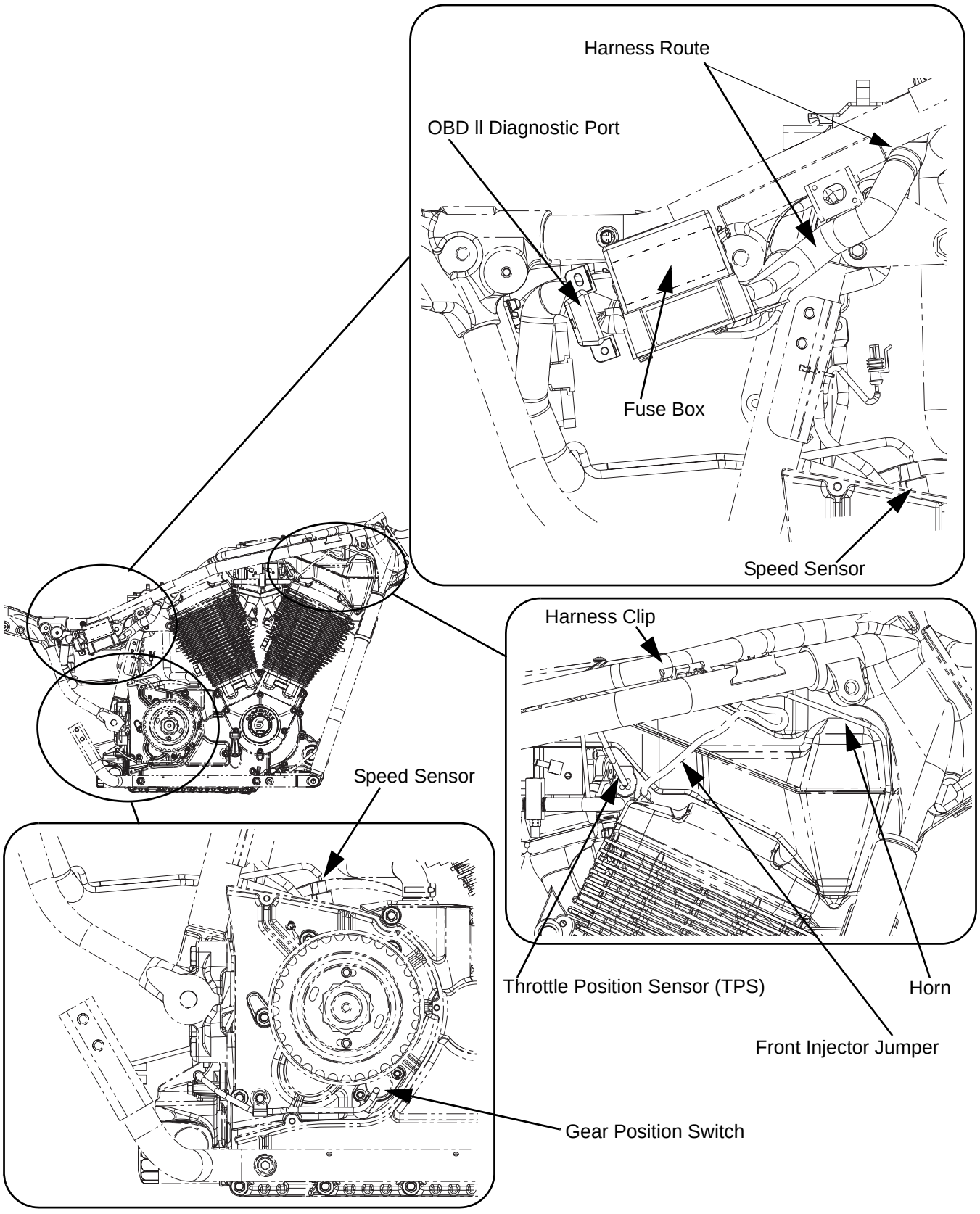


= Apply Dielectric Grease
P/N 2871329

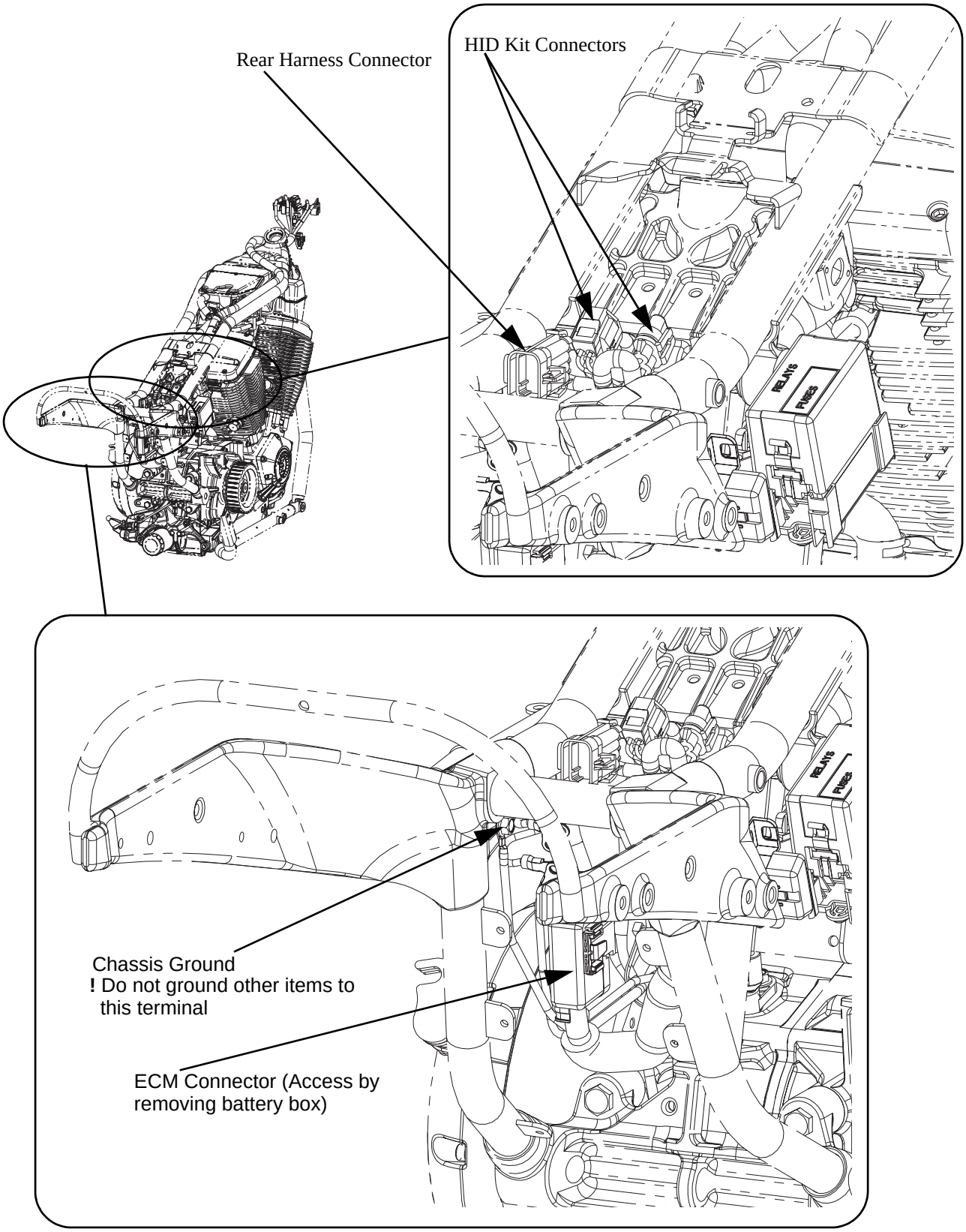
WIRE HARNESS - RIGHT REAR FRAME



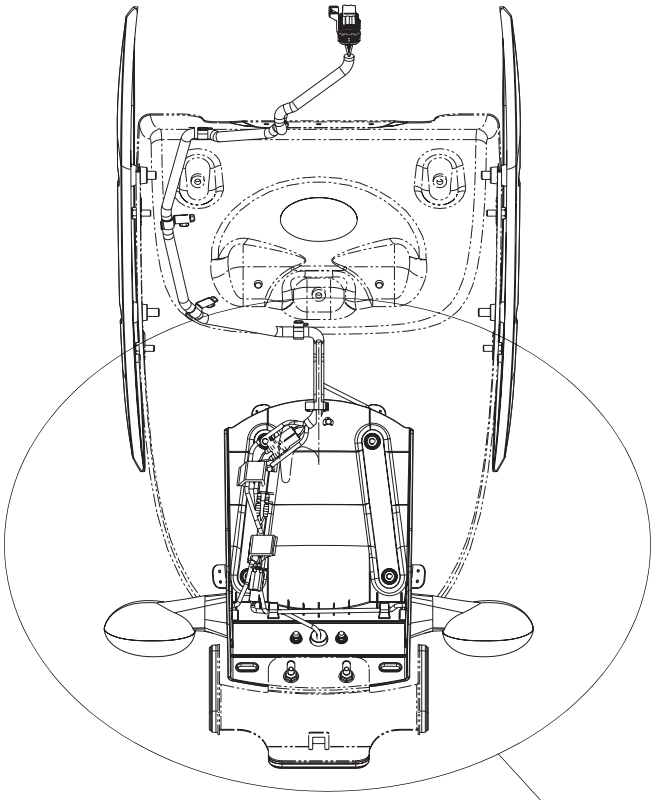
WIRE HARNESS - RIGHT SIDE



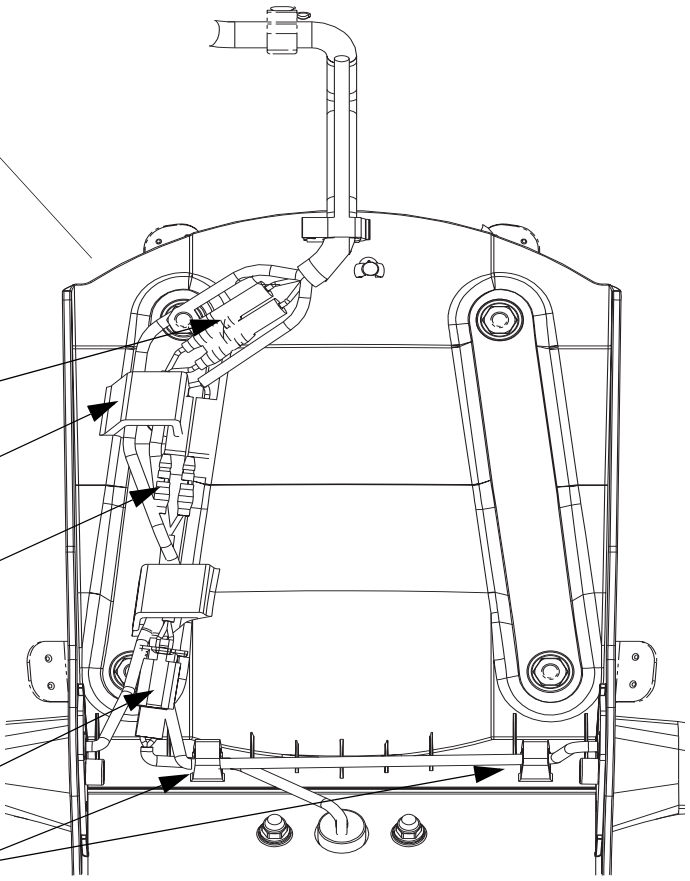
WIRE HARNESS - UNDER SEAT



REAR FENDER

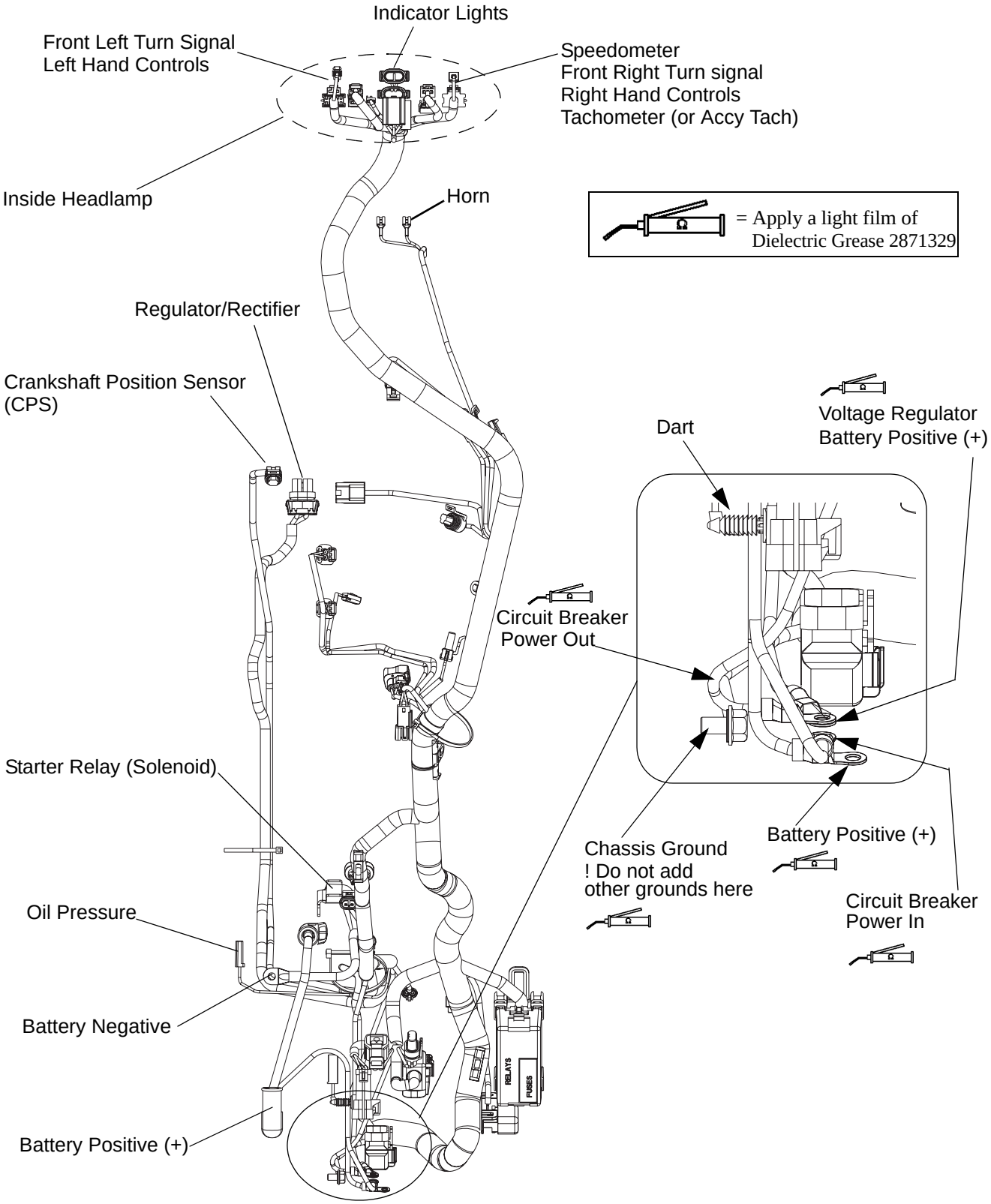


Refer to Chapter 3 for fender removal

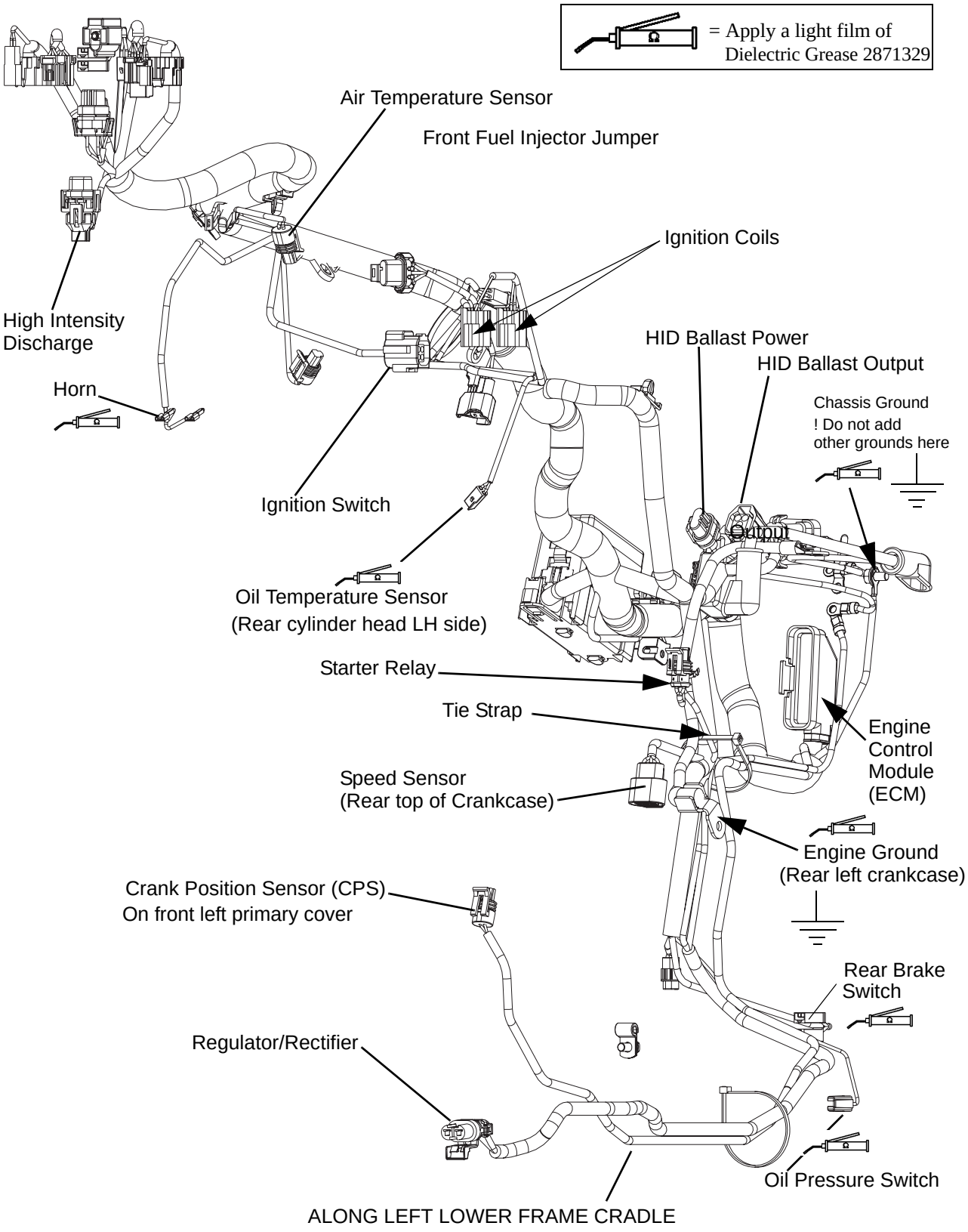

Stop / Tail Lamp Connectors
Secure wires in guides
Turn Signal Connectors
License Plate Lamp Connectors
Secure wires in guides

WIRE HARNESS CONNECTOR LOCATIONS

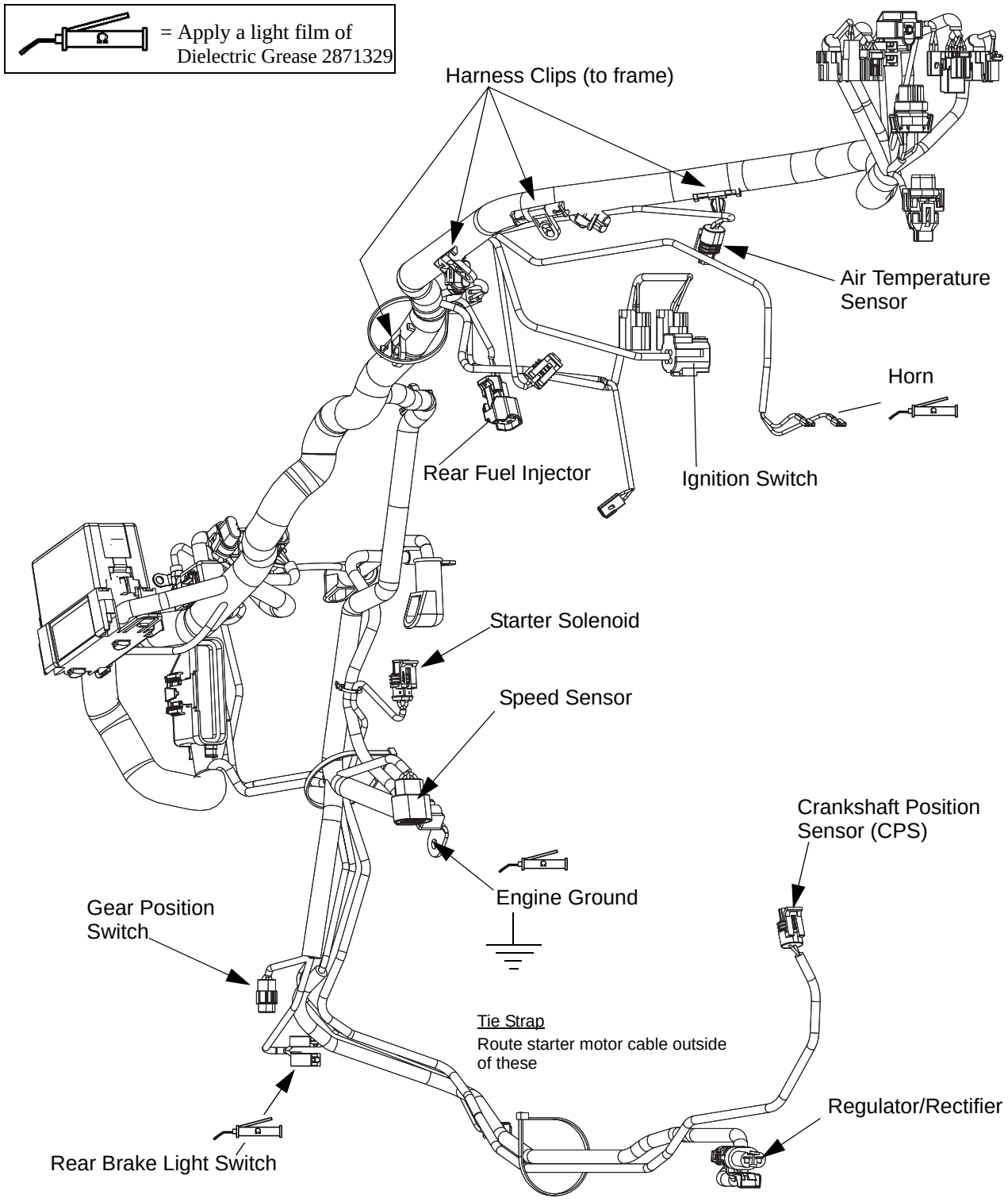
TOP VIEW



LEFT SIDE VIEW

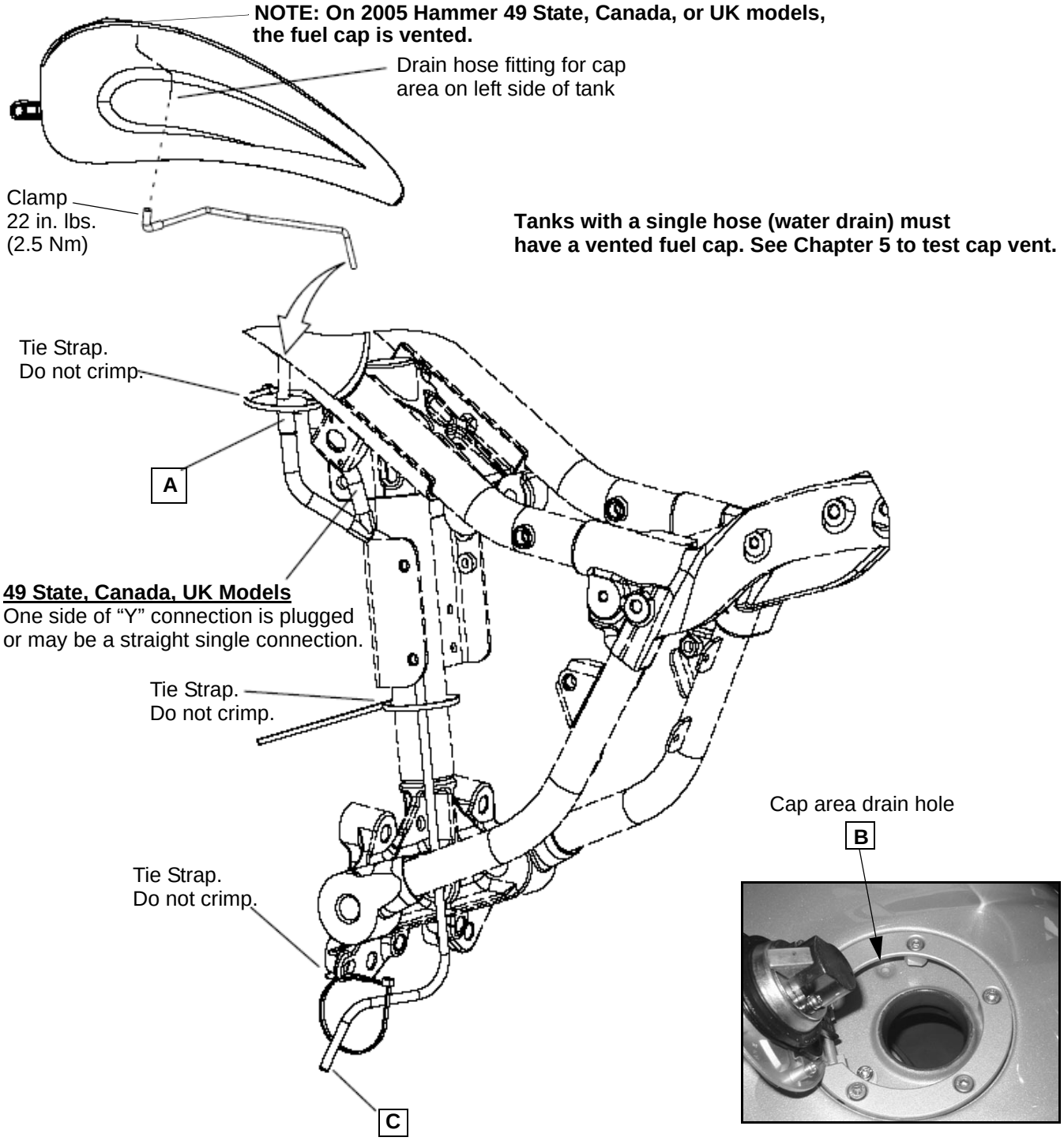


RIGHT SIDE VIEW



FUEL TANK VENT AND DRAIN HOSE ROUTING

2005 HAMMER - 49 STATE, CANADA, UK


NOTE: On 2005 Hammer 49 State, Canada, or UK models, the fuel cap is vented.
Drain hose fitting for cap area on left side of tank
Clamp
22 in. lbs.
(2.5 Nm)
Tanks with a single hose (water drain) must have a vented fuel cap. See Chapter 5 to test cap vent.
Tie Strap.
Do not crimp.
A
49 State, Canada, UK Models
One side of "Y" connection is plugged or may be a straight single connection.
Tie Strap.
Do not crimp.
Tie Strap.
Do not crimp.
C
Cap area drain hole
B

Water Drain/Hose Inspection

1. Disconnect drain hose from junction at rear left side of fuel tank (A). Open fuel cap and inspect drain hole (B). Pump low pressure air into bottom of drain hose at the junction and listen for air escaping from the drain hole. Verify drain hose below "Y" fitting at (A) is clear to the end of hose at (C).

DOWNLOAD
COMPLETE Manual